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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,415	08/23/2001	Kenneth C. Johnson	SEN-012	9943

7590 07/07/2004
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EXAMINER

SEVER, ANDREW T

ART UNIT	PAPER NUMBER
2851	

DATE MAILED: 07/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/938,415

Applicant(s)

JOHNSON ET AL.

Examiner

Andrew T Sever

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Rodney Fuller
Primary Examiner

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings were received on 11/24/2003. These drawings are approved.

Claim Rejections - 35 USC § 112

2. Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Independent claim 1 claims a metrology instrument for samples containing grating-like microstructures comprises of a plurality of linear elements thereon. Further applicant claims among other things the instrument includes an illumination source directing light and an optical detector for detecting reflected light. Applicant fails to specify what the illumination source is (in figures 1 and 5 it comprises of a box labeled 101) and applicant does not specify the form the optical detector takes (again the optical detector is also a box labeled 106). Since applicant does not specify what type of light (infrared, visible, ultraviolet, x-ray, gamma) one of ordinary skill in the art would not know what kind of light source to use for the illumination source. Since applicant did not specify what form the optical detector takes (nor show any optics) or specify what type of light source is being used, one would not know what form the optical detector takes and

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one with ordinary skill in the art could choose from such diverse detectors as a Geiger counter (gamma rays), photographic film (x-rays, visible), microscope (visible), photodiode (infrared, visible, ultraviolet, x-ray), and other well known light detectors. One with ordinary skill in the art would not be able to discern what type of detector to use based on applicant's disclosure of what the sample is, since no disclosure of what the sample is (whether it is a silicon wafer or a piece of sheet metal for example), is given. Accordingly one of ordinary skill in the art would not be able to make or use the invention with out undo experimentation since applicant has not defined what wavelength/energy the metrology instrument is designed to work over, what type of sample it is designed to analyze.

With regards to applicant's claim 2:

Applicant has not defined what that range of wavelengths is or what light source can produce that range.

With regards to applicant's claim 2-5:

Claims 2-5 are rejected due to their dependency on claim 1 and in the case of claim 2 as well as the above.

With regards to applicant's claims 6-11:

See above.

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With regards to applicant's claims 12-15

See above and see In re Ghiron and Ulrich (169 USPQ 723) (although claims are method claims, it is material whether there is adequate disclosure of apparatus).

With regards to applicant's claim 16:

See above specifically with regards to the light source.

No prior art rejections will be provided for claims 1-16, since it is not known what material applicant is analyzing, and it is not known what type of light source or detector is being used. Applicant is directed towards the rejection mailed on 4/18/2003, which includes a rejection based on Haga et al. in view of de Groot which possible reads on some of the claims (it should be noted that de Groot does teach micro-structures.)

Applicant is directed to In re Brandstadter, Kienzle, and Sykes (179 USPQ 286) and to In re Ghiron (169 USPQ 723).

Response to Arguments

3. Applicant's arguments filed 11/24/2003 have been fully considered but they are not persuasive.

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Applicant has correctly stated that the support means and processing means limitations have been removed from the claims, accordingly this part of the 35 USC 112 rejection has been withdrawn. Applicant has also change optical means for detecting the optical signature to an optical detector and then argued that one with ordinary skill in the art would be able not require undue experimentation to determine the appropriate detector. The office disagrees; applicant's disclosure of the detecting means is merely a labeled box with an attributed function, further other then saying it detects light, applicant does not detail what kind of light it detects. The type of light makes a difference in the type of detector used. The type of light an detector to be used can not be discerned from the material/grating since this is not disclosed either. Accordingly the 112 rejection is repeated (modified to reflect the amended claim language and new claims) and made final.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

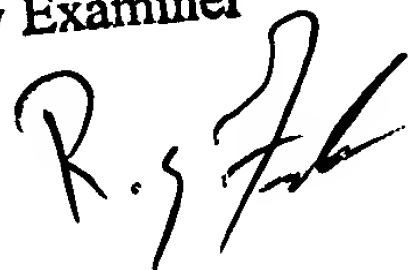
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 271-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AS

Rodney Fuller
Primary Examiner

A handwritten signature in black ink, appearing to read 'R. Fuller', is written over the printed name and title of the examiner.